

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for forming a semiconductor device comprising the steps of:

depositing a monoatomic metal-film including a metal on a base by using a metal source including a compound containing said metal and no oxygen; and

depositing a metal oxide film including oxide of said metal on said monoatomic metal film by using a CVD technique.

2. (Currently Amended) The method according to claim 1, further comprising, before said monoatomic metal-film depositing step, the step of supplying oxidizing gas onto a surface of said base.

3. (Original) The method according to claim 2, wherein said oxidizing gas includes heated H₂O.

4. (Original) The method according to claim 2, wherein said oxidizing gas includes at least one gas selected from the group consisting O₂, active oxygen, ozone, and N₂O.

5. (Currently Amended) The method according to claim 1, further comprising, before said monoatomic metal-film depositing step, the step of supplying hydrofluoric acid onto a surface of said base.

6. (Original) The method according to claim 1, wherein said metal source includes at least one said compound selected from the group consisting of $TaCl_5$, TaF_5 and $Ta(N(C_2H_5)_2)_3$, and said metal oxide film is tantalum oxide.

7. (Original) The method according to claim 1, wherein said metal source includes $Al(CH_3)_3$, and said metal oxide is titanium oxide.

8. (Original) The method according to claim 1, wherein said metal source includes TiC_4 or $Ti(N(CH_3)_2)_4$ and said metal oxide is titanium oxide.

9. (Original) The method according to claim 1, wherein said metal source includes at least one said compound selected from the group consisting of $Hf(NCH_3)_2)_4$, $Hf(N(C_2H_5)(CH_3))_4$ and $Hf(C_2H_5)_2)_4$, and said metal oxide is hafnium oxide.

10. (Original) The method according to claim 1, wherein said metal source includes at least one said compound selected from the group consisting of $NbCl_5$, NbF_5 and $Nb(N(C_2H_5)_2)_3$, and said metal oxide is niobium oxide.

11. (Currently Amended) The method according to claim 1, further comprising, between said monoatomic metal-film depositing step and said metal oxide film depositing step, the step of supplying oxidizing gas onto a surface of said monoatomic metal-film.

12. (Currently Amended) The method according to claim 12~~claim 1~~, wherein said base is either silicon substrate, polysilicon film, silicon nitride film or a metallic film.

13. (Original) The method according to claim 1, further comprising the step of forming a conductive film on said metal oxide film, wherein said steps are used for forming a capacitor including said base as a bottom electrode, said metal oxide film as a capacitor insulation film, and said conductive film as a top electrode.

14. (Currently Amended) A method for forming a semiconductor device comprising:

depositing a monoatomic metal-film including a metal on a base in an oxygen-free environment; and

depositing a metal oxide film including an oxide of the metal on the monoatomic metal film using a CVD technique.

15. (Previously Presented) The method of claim 14, wherein the semiconductor device is adapted to function as a capacitor.

16. (Currently Amended) The method of claim 14, wherein the depositing of the monoatomic metal-film including the metal includes using a metal source including a compound containing the metal.

17. (Currently Amended) A semiconductor device formed by a method, the method comprising:

depositing a monoatomic metal-film including a metal on a base in an oxygen-free environment; and

depositing a metal oxide film including an oxide of the metal on the monoatomic metal film using a CVD technique.

18. (Previously Presented) The semiconductor device of claim 17, wherein the semiconductor device is adapted to function as a capacitor.

19. (New) A method to form a semiconductor device comprising the steps of:

depositing a monoatomic seed layer containing a metal on a base by using a metal source including a compound containing said metal and no oxygen, said deposition done via an atomic layer deposition (ALD) technique; and

introducing an oxygen source to convert said monoatomic seed layer containing metal to a monoatomic seed layer containing a metal oxide and depositing a film of the same metal oxide on said monoatomic seed layer via a CVD technique.

20. (New) The method of claim 19, wherein said metal source includes at least one said compound selected from the group consisting of $TaCl_5$, TaF_5 and $Ta(N(C_2H_5)_2)_3$, and said metal oxide film is tantalum oxide.

21. (New) The method of claim 19, wherein said oxygen source is O_2 gas.

22. (New) The method of claim 19, wherein said metal source includes at least one said compound selected from the group consisting of $Hf(NCH_3)_2)_4$, $Hf(N(C_2H_5)(CH_3))_4$ and $Hf(C_2H_5)_2)_4$, and said metal oxide is hafnium oxide.

23. (New) The method of claim 19, wherein said metal source includes at least one said compound selected from the group consisting of $NbCl_5$, NbF_5 and $Nb(N(C_2H_5)_2)_3$, and said metal oxide is niobium oxide.